

J. J. MURPHY.
 ROLL TOP DESK LOCK.
 APPLICATION FILED MAR. 7, 1910.

962,377.

Patented June 21, 1910.

Fig. 1

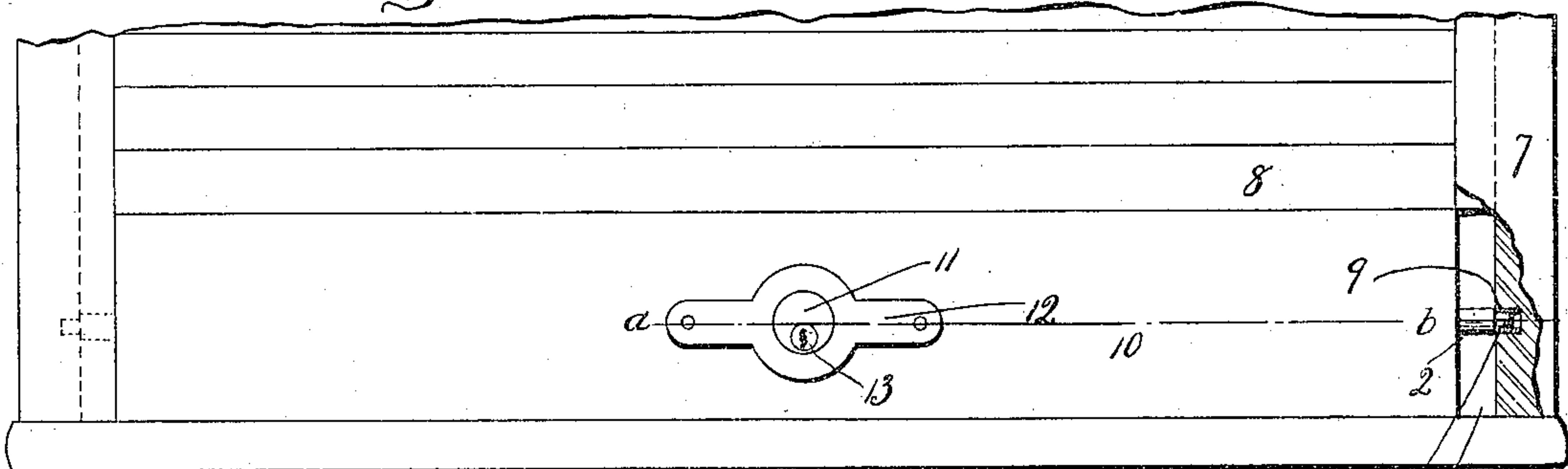


Fig. 2

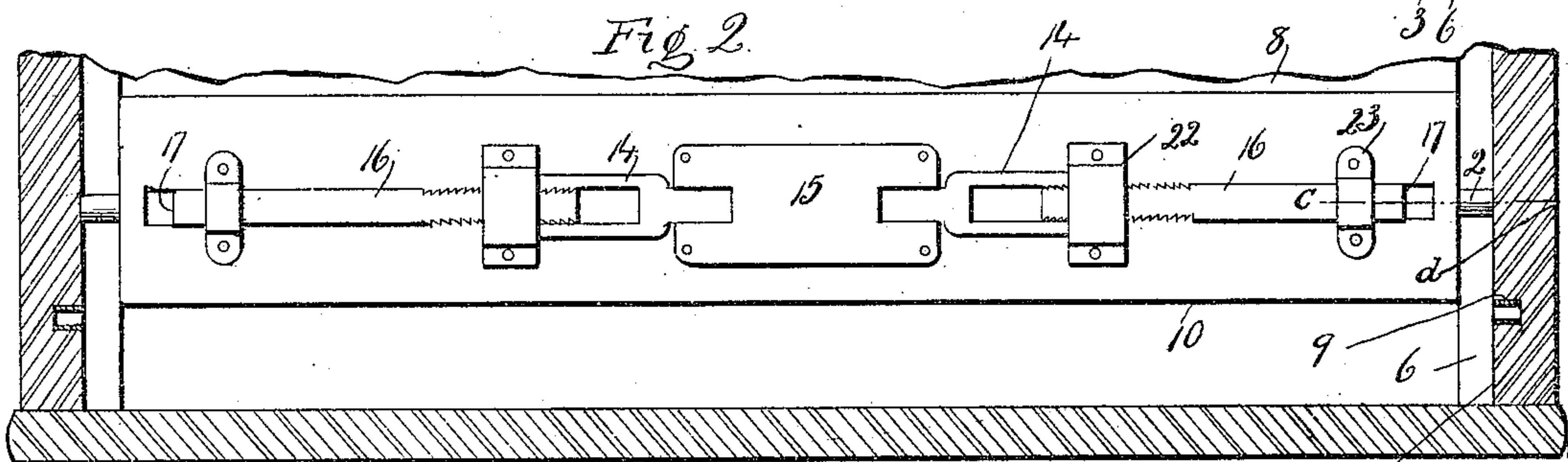


Fig. 3

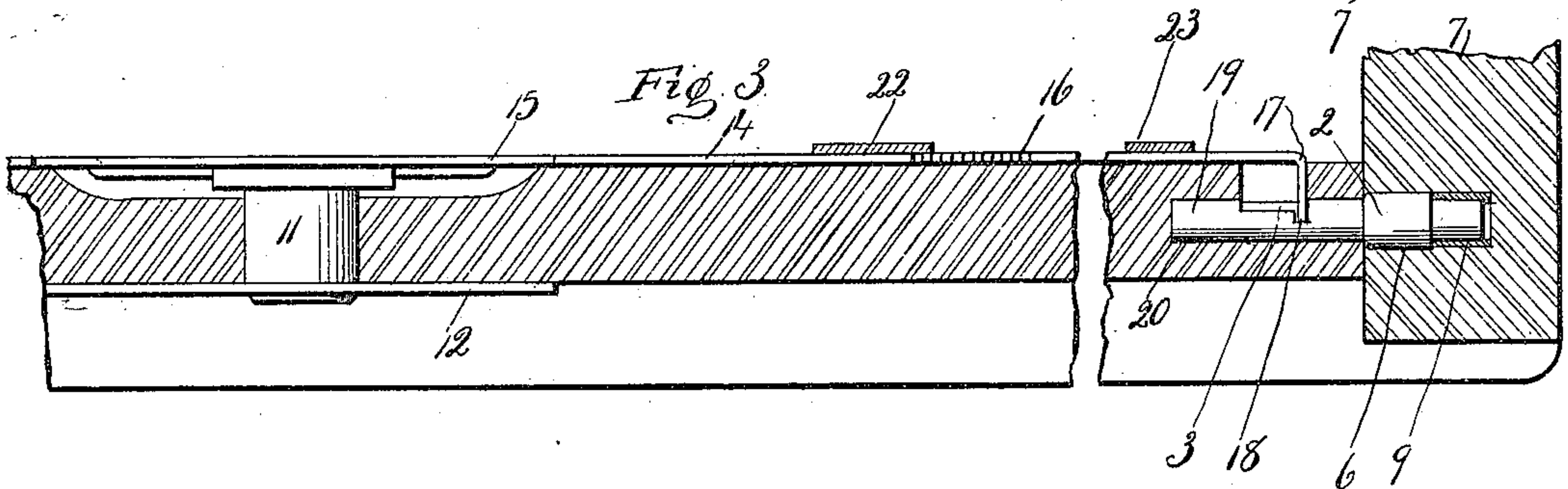


Fig. 4

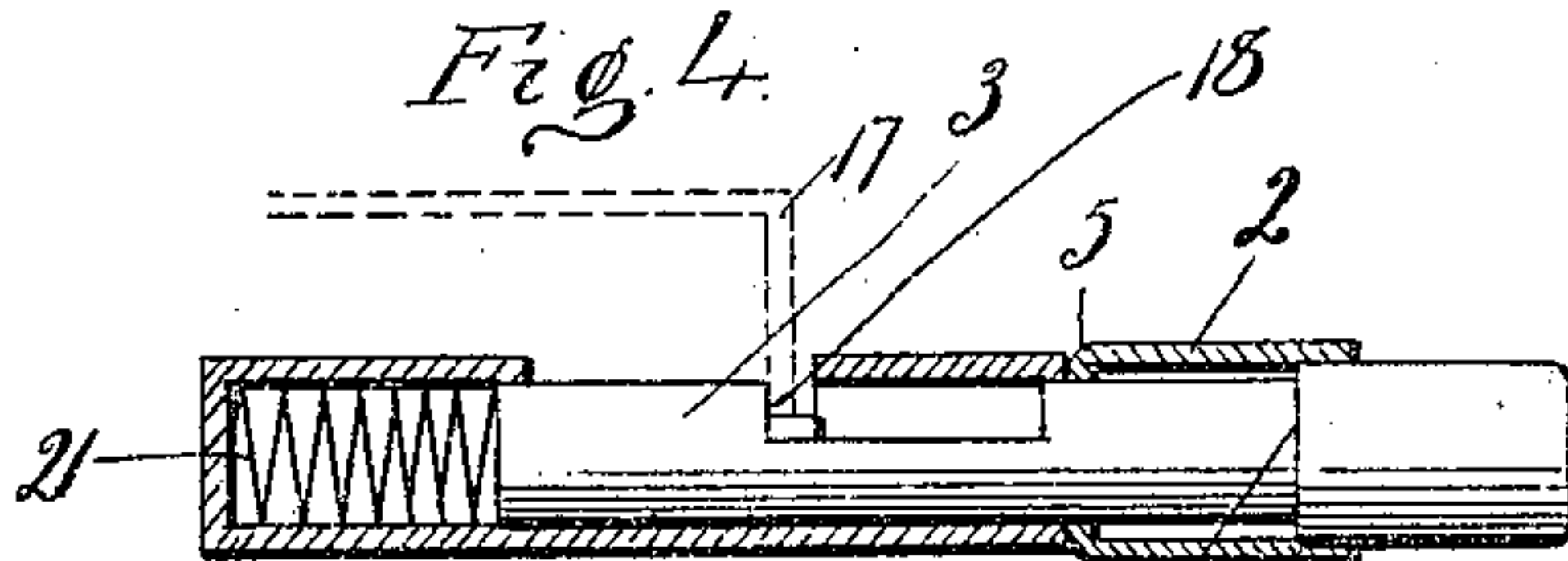
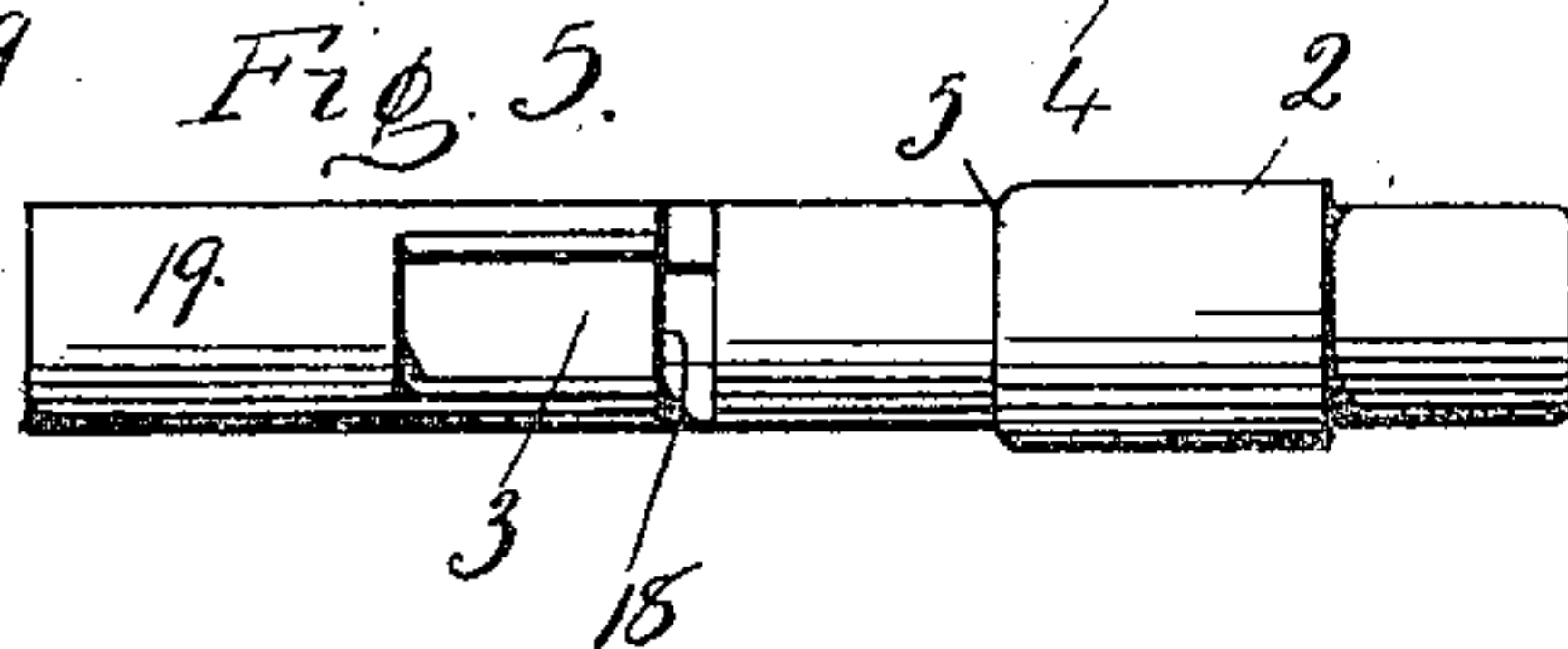


Fig. 5



Witnesses
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UNITED STATES PATENT OFFICE.

JAMES J. MURPHY, OF TERRYVILLE, CONNECTICUT, ASSIGNOR TO EAGLE LOCK CO.,
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ROLL-TOP-DESK LOCK.

962,377.

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To all whom it may concern:

Be it known that I, JAMES J. MURPHY, a citizen of the United States, residing at Terryville, in the county of Litchfield and State of Connecticut, have invented a new and useful Improvement in Roll-Top-Desk Locks; and I do hereby declare the following, when taken in connection with the accompanying drawings and the numerals of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1 a broken view in front elevation of the top of a roll-top desk provided with my improved lock, the roll itself being shown in its closed and locked positions. Fig. 2 an inside view of the same parts of the desk, showing both of its sides in section, and the roll in a partly open position. Fig. 3 a broken view in horizontal section on the line *a—b* of Fig. 1, the parts being shown on a larger scale. Fig. 4 a broken view in horizontal section on the line *c—d* of Fig. 2, showing one of the side arms of the desk and one end of the rail of the roll and its bolt and the anti-friction roller thereof. Fig. 5 a detached view in inside elevation of one bolt and its anti-friction roller.

My invention relates to an improvement in roll-top desk locks, the object being to provide for the purpose, a simple and reliable lock constructed with particular reference to reducing the friction entailed by moving the roll or curtain of the desk into its open and closed positions.

With these ends in view my invention consists in a roll-top desk lock having a bolt provided with an anti-friction roller which rides upon the walls of a guide-way formed in the inner face of a side arm of the desk, the said bolt being adapted to be projected through the said roller.

My invention further consists in certain details of construction and combinations of parts as will be hereinafter described and pointed out in the claims.

In carrying out my invention as herein shown, I mount an anti-friction roller 2 upon the projecting outer end of the bolt 3 which is formed near its said end with a shoulder 4 for the retention of the said roller, the inner end of which is turned inward to form a retaining-flange 5 which engages

with the said shoulder and so prevents the roller from slipping outward over the end of the bolt. The said roller 2 is made just enough smaller in diameter than the width of the curved guide-way 6 in the inner face of the side-arm 7 of the desk to permit the roller to move freely through the said guide-way as the roll or curtain 8 of the desk is raised and lowered. The roller at this time rotates upon the end of the bolt and so minimizes the friction of its travel through the guide-way. At the lower end of the said guide-way 6, a keeper 9 is inserted into its bottom wall so as to be in line with the bolt 3 when the roll 8 is in its closed position at which time the bolt 3 is shot outward through its anti-friction roller 2 into the keeper 9, the internal diameter of which is only a trifle larger than the external diameter of the bolt. When the bolt is shot into its locked position as described, its anti-friction roller 2 occupies the extreme lower end of the guide-way 6 as shown in Fig. 3. To unlock the roll, the bolt is retracted from the keeper 9 into the roller 2 which now turns upon it as the roll 8 travels up and down into its open and closed positions. Although I have spoken of only one bolt, it will be understood that two are by preference employed.

For the projection and retraction of the bolt I may employ any approved form of lock-mechanism, the specific character of which is no part of my present invention.

As shown, the rail 10 which is the bottom member of the roll 8, is furnished with a centrally located pin-tumbler lock 11 projecting forward through an escutcheon 12 secured to the front of the rail. The inner end of the plug 13 of the said lock, is connected by means (not shown) with yokes 14 emerging at their outer ends from the respective ends of a plate 15 covering the back of the lock. The said yokes 14 are adjustably connected at their outer ends with bars 16, the outer ends of which are furnished with fingers 17 entering transverse notches 18 in the bolts 3 which are located in tubular sockets 19 having their inner ends closed and located in counter-bores 20 in the ends of the rail 10. Helical springs 21 in the ends of the sockets 19 are employed for exerting a constant effort to project the bolts 3 into their locked positions in which they enter the keepers 9. But

the construction of the lock 11 and the particular mode of its connection with the bolts 3 may be varied as desired, forming no part of my present invention. Guide-straps 22 and 23 are employed for retaining and guiding the yokes 14 and bars 16. While I have described only one bolt and its coacting parts, it will be understood that the construction described is duplicated at the other end of the rail, both bolts 3 being operated and controlled by the centrally arranged lock 11.

I claim:—

1. In a roll-top desk lock, the combination with a bolt, of an anti-friction roller mounted upon the end of the said bolt which is longitudinally movable with respect to it.

2. In a roll-top desk lock, the combination with a bolt provided with a shoulder, of an anti-friction roller mounted upon the said bolt and coacting at its inner end with the shoulder thereof, whereby the roller is re-

tained upon the bolt which is longitudinally movable with respect to the said roller.

3. In a roll-top desk, the combination with the roll thereof, of a side-arm formed upon its inner face with a guide-way, a keeper leading out of the lower end of the said guide-way, a lock mounted upon the roll and having a longitudinally movable bolt adapted to be entered into the said guide-way and keeper, and an anti-friction roller mounted upon the projecting end of the bolt and traveling in the said guide-way in which it remains when the bolt is projected into the keeper, the bolt being longitudinally movable with respect to the said roller.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

JAMES J. MURPHY.

Witnesses:

OTIS B. HOUGH,
HARRY C. CLOW.